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EDWARD ALLEN FAY,

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J. WILLIAMS, OF CONNECTICUT, R. MATHISON, OF ONTARIO, R. O. JOHNSON, OF INDIANA, J. E. RAY, OF NORTH CAROLINA, AND A. L. E. CROUTER, OF PENNSYLVANIA,

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AMERICAN ANNALS OF THE DEAF.

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ANALOGY THE TEST OF TEACHING.

EVERY teacher who is at all interested in his work has sought some means of knowing unmistakably whether the pupil's expression in language represents a clearly conceived idea, or is the mere repetition of a parrot. In other words, he is concerned not so much for the apparent results as for the processes by which the results are obtained, and what the results really represent in the pupil's mind. Every true teacher wants a test which will at once stamp each pupil's work as the expression of a thoroughly assimilated idea, or simply the mechanical operation of the memory. He must prove constantly that the pupil expresses his own thought, for no other work is worthy of the name of education, and nothing else can guide the teacher in the proper selection of the subject-matter of instruction.

The proof of the lesson is in the application of it. Many teachers have long followed the plan of giving words and phrases to be incorporated into sentences, without understanding why the exercise is valuable, or knowing what mental processes are required to perform the exercise as it should be performed. The teacher should be able to detect at once whether the pupil is merely juggling with words, substituting here and changing a little there, or whether he enters into the spirit of the exercise, grasps

the meaning of the word or phrase, and selects from his observation or experience circumstances which make a perfect setting for the new expression. To do the latter requires thought and is an exercise in training as well as a test of understanding. It is easy, however, to distinguish the two processes, and no teacher need be deceived by the superficial work. The application of this method involves the highest processes of thought, the analysis and the analogy, and the teacher should follow this method from the applications of the simplest words to the most abstract principles. As a test it is absolute. A pupil may be able to give "the sign" for a given expression, he may be able to give a definition of it, he may use it in its original setting, but these tests are not sufficient to prove a clear understanding of the term or principle. The real test is to eliminate the idea from its original surroundings and introduce it into analogous conditions in a way to show that the meaning is understood and its idiomatic construction is known. The ability to use an expression is the test of knowing it.

Some one has asked, "Which is the natural way of learning language,—to require pupils to hunt about for ideas to fit certain words, or to encourage them to seek words to express ideas that they already possess?" The answer is, "Both." The child hears certain words and phrases in connections and circumstances which make them convey a certain meaning to him, then you will soon find him making an application of the new expression to similar circumstances, invented, in most instances, to fit the expression, and this constitutes a large part of the child's play. It is a constant process of receiving and giving, the latter forming much the larger share of the developing process. The hearing child's progress in the acquisition of language is due not so much to the number of words he hears as to his disposition to repeat every new expression in innumerable applications in his play.

It is the application which involves thought and is the real test of understanding. The more of these exercises we introduce into our school work the greater will be the progress in language.

Let us apply this process to the school work. A phrase which is new to the pupil occurs in the lesson. The pupil may gain a fair idea of its meaning from the context and be able to write a test sentence at once, but this plan would involve many mistakes and much time spent in correction. A better plan is for the teacher to write one or more sentences illustrating the use of the phrase in connection with familiar circumstances, each illustration making the meaning more clear and aiding retention. Then the pupils write their sentences. These are corrected, and then spelled or written for the class to read. Here, then, are upwards of twenty applications of the phrase with very little expenditure of time. The trouble with most of us is that we try to cram a large vocabulary into our pupils' heads in various ways, which they are not trained to use. To learn the meaning of a word is one thing, a comparatively easy matter, and to know its idiomatic construction in the sentence is another, fully as important, but much more difficult to attain.

So much for the method as applied to primary work. The trouble is teachers rarely advance beyond this primary use of the principle. I have mentioned in a previous article* the use I have made of the analogies of history and geography, referring new subjects as they appear in the lesson back to analogous subjects of previous study. In this article I wish to show how the same principle may be applied in language teaching, bringing out in the same manner as we treat words and phrases the more complex principles and combinations of principles. To keep the pupil at work constructing sentences from words and phrases throughout his course will never result in the

* "How to Study," *Annals*, xli, 265–274, 370–380.

trained mind able to analyze a subject into its leading principles and apply those principles to the business of life. The exercise in analysis and analogy should be the foundation of a very large share of our teaching from the kindergarten clear through the greatest difficulties of the course. Show the child something that is red, and then require him to select all red articles from a group. The same with things that are round. So with words; if the pupil catches the meaning, let him apply it in the sentence. If the pupil understands the use of an adjective clause, let him give a sentence illustrating it. If he understands a principle involving cause and effect or motive for action, let him apply it to some experience of his own, to some creation of the imagination, or to some incident of observation or acquired knowledge. This is a perfect test, and it is also one of the best methods of strengthening the logical memory.

The following examples of school work along this line have been corrected in minor details of language, but the thought in each case is original. The stories on which the analogies are based have been treated in various ways, according to the difficulty of the subject. Some of them have been the regular lessons in the reader, while others have been given first as an exercise in reproduction. In almost all cases illustration of the lesson by drawing has been required in order to make sure that the backward members of the class have a clear idea of the subject. By drawing, many wrong impressions are revealed in cases where the language of the reproduction gives no clue to the error. Then, by questioning, the teacher draws out the leading principles involved in the story, and these written on the board give the pupils their working analysis. The pupils then write their analogous stories, which they compose from memory, observation, experience, or imagination. After a little practice in this work, the pupils are left to do the work of analyzing the story and outlining the leading principles without aid.

Æsop's Fables are well adapted for this kind of work. One of the first to be given was "The Fox and the Crow." Almost every one in the class analyzed this into its leading principles—cunning and flattery on the part of the fox, and vanity and weakness on the part of the crow, and applied them in a story of his own. A few specimens of the pupils' work will illustrate better, perhaps, what they can do. The following was written to illustrate the story of "The Lazy Grasshoppers:"

Albert and Billie lived in the country. Albert was very industrious and worked very hard for a living for his wife and children and himself. When the new year came he plowed his farm, and when spring came he planted the crops. He cultivated, and hoed the weeds as hard as he could all summer. In the fall he sold his crops and got lots of money. He had enough to buy clothes and food for himself and family. They were happy and comfortable in their own home. Billie did not work hard on his farm, but wasted nearly all his time. He rode his horse to town every day, and took pleasure in drinking and smoking with bad company the whole year round, while Albert was hard at work on his farm. In the fall Billie had a poor crop. He did not get money enough to buy food and clothes to support his wife and children, and so they became beggars. Billie went to Albert's home and begged some food and clothes for his wife and children. Albert said to him, "What did you do all the year? Why did you not raise crops on your farm?" Billie answered, "All the year I went to town to have good times drinking and smoking, and also went hunting with my best friends." "I have worked very hard on my farm all the year, and now we are comfortable and happy. But we have nothing to share with you, for we need it all for our own living," said Albert. "How stingy you are!" cried Billie. "How lazy you are!" answered Albert. Billie and his wife and children were starving to death. You all must follow Albert's example.

There is nothing very difficult about this, but the pupil who wrote it is on the right road to an education and already has a good idea of one phase of life. Take another—"The Dog in the Manger:"

A rich man had a lot of muskmelons growing in his garden. He did not want to eat them all, and he could not sell them. One day some boys came and knocked at the door. The rich man opened the door and the boys said to him, "Do you want to eat all your muskmelons?" The rich man answered, "No; I can't eat them." The boys said, "Please give us some of them." "No," said the old man. A few weeks afterwards the

boys passed the rich man's garden and saw the rotten melons on the ground. "What a mean man he is," said the boys.

Here is one to parallel the story of "Cock-a-doodle and the Piece of Gold," which shows that the pupil is beginning to read the newspapers:

A man was crossing the snow of Klondike. He had no food. He travelled several days trying to find food. At last he saw something lying on the snow. He ran to it and found it was a bundle. He opened it and found it was gold. "It is worthless to me," he cried; "I would rather find a loaf of bread than a million dollars' worth of gold." And soon after he died of starvation.

"The Wind and the Sun" brought out the following from a bright girl:

Once a large boy wanted his little brother to do something for him, and when the little fellow refused he shook and scolded him. Still the little one refused. Just then their sister came along, and, seeing the trouble, told the larger boy to stop. Then, petting and talking kindly to the little one, she finally got him to do as the elder brother wished.

The following is a little girl's first attempt, based on the story of "Red Riding-Hood:"

One night two little girls sat up near the table reading books. They were alone in the house. A man came to the door and knocked. They thought it was Santa Claus. They ran to the door and opened it, and welcomed him. They asked him, "Are you Santa Claus?" He said, "Yes." They asked him, "Will you give us some presents for Christmas?" He said, "Yes." But he was deceiving them. He asked them to show him the safe in the kitchen. They let him go into the kitchen. The man opened the safe and got some food to eat. He took all the food and stole some other things and ran away. The girls were not wise to let the man come in and talk with him. He was a robber, not Santa Claus.

"The Monkey and the Cat's Paw" brought out the following analogies:

James and Frank saw many watermelons in a field. James said to Frank, "You go in and get a nice watermelon." Frank went in and got it, and was climbing the fence, when the dog caught him by the pants. Frank dropped the watermelon. James caught it and ran off with it. James was free and had a nice time eating the watermelon, but Frank was caught.

Ruby was a bad girl. She had a little sister named Sallie. One morning they were sitting near their mother watching her cook some sausages. The sausages were almost done. Their mother went out for a minute.

Ruby told Sallie to take out one of the sausages for her. Sallie was innocent. She went to the fry-pan and tried to get one of the sausages, but the hot lard blistered her fingers. She tried again and was successful, but she burned her finger. She dropped the sausage quickly to look at her finger. In a moment she turned round and found Ruby was eating it.

"The Battle of the Birds and Beasts" was the basis for this:

There was once a great battle between the birds and the fish. The duck was a coward. It could not choose which side to take. When the birds were nearly defeated by the fish, the coward duck went to help the fish. The fish said, "You are not a fish." But the duck told them that it was a fish and could swim as well as any of them. Just then the battle turned and the birds were successful. The coward duck flew over to join the birds. The birds told the duck to go away, as it belonged with the fish. But the duck told the birds to look at its feathers and wings. "I can fly as well as any of you," said the duck. But the birds knew its trick and drove the duck back to the water.

There are several important benefits derived by following this method which do not appear at first thought. In this as in all other exercises the teacher may aid the pupil and wake up his mind by presenting good illustrations, but the application of the pupil himself is the only work that really benefits him.

Sometimes the principles in a story will call up experiences not perfectly understood. A little thought will not only render the experience a good analogy, but serve also to make clear the experience itself which before was vague and had no real place in the intellect or the character. I have watched these operations in my pupils as well as in my own study. The process of completing the analogy renders clear both the new subject and the past experience with which it is compared, and forms a strong link in the memory. In all this work the teacher will aid the pupil to develop thought and make each point more distinct by bringing out the contrasts to the principles in the lesson. Whenever a story presents a foolish action, let the pupils solve the problem of the wiser course to be pursued under the circumstances. The ideal lesson is

closely connected with the life of the child, past, present, and prospective. The use of the analogy gives the opportunity for these applications to life.

The teacher who pursues this plan will find himself drifting with his class into real literature, for there must be in the subject-matter selected for instruction something of vital interest, some vital principle of life, as a foundation for the exercise. For this reason alone it should claim the attention of thoughtful teachers.

Another point of great value is that it trains the pupil to grasp the selection in its unity. Some pupils read words only, others read sentences, still others take in paragraphs or sections of a story, while but few take in the story as a whole. This, of course, depends upon the difficulty of the piece selected. The ability of the pupil to grasp the lesson in its unity should be the teacher's guide in the selection of subjects. The course should be carefully graded to meet this requirement. In order to test your pupils in this respect, give them for a lesson an incomplete story, or one with some important link in the connection left out, and see if they will notice the fact that the story lacks unity. When the lesson given in the book is a chapter of a continued story, see how many have noticed the fact and have been interested enough to read the story to the end.

The use of this exercise is not only a guide to the selection of subject-matter, but it is also of great value for purposes of grading pupils. It is a test which discriminates growth and power, and for this reason should supersede tests which rely chiefly on the memory.

I have found no other exercise which seems to embrace so many good features. The repetition of applied language and applied principles is gained with economy of time and of energy. It gives a wide field for the use of the imagination along lines carefully drawn by the principles contained in the lesson. It offers the best

opportunity for the study of human character and human motives, and the discrimination of the principles of morality. It arouses the highest interest in study, for nothing can do this better than an immediate use of the knowledge we acquire. It is an exercise which compels study according to correct principles.

There is another phase of this subject which may be very profitably carried on in connection with these exercises. Literature and much of our daily conversation is full of expressions which in a literal sense mean nothing, figures which give to language its grace and beauty, and which depend upon the cultured imagination as well as the understanding for the pleasure they give to the reader. The simile, the metaphor, and the allegory, founded on resemblance, form a large part of the figurative language in common use, and training along this line will not only prepare the pupil to understand and appreciate the beauties of our language, but it is also a training which compels study of the right kind and results in the power to think.

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HEARING DEAF-MUTES.—II.*

THE adherents of auricular exercises betray a lack of discriminating valuation of facts when they assert that in the partially deaf the hearing is gradually developed into the hearing of vowels, then of words, and finally of sentences. The articulation exercises in deaf-mute schools begin with the development of individual sounds, and then proceed very slowly to the construction of syllables, words, and sentences. In the course of this progress, whatever residue of hearing may exist is likewise exer-

* Continued from the April number of the *Annals*, page 169.

cised, but it is fallacious to assert that persons with a minimum of hearing can attain to the actual hearing of words and sentences.

For the accurate comprehension of words and sentences it is necessary that, besides the vowels, one should hear also the consonants, or at least some of them. The majority of the deaf-mutes under discussion, however, never get so far. When they correctly repeat a familiar word that reaches their ear, it is because of the indistinct collective sound which they have perceived.

The pupil depends upon guessing, makes substitutions and combinations, joins into a complete whole the fragments of the word or sentence that reach his ear, but always hesitates and is never sure that he has hit upon the right interpretation. It is always the rhythmic quality of words and sentences, as marked by the vowels and depending upon the cadence of the syllables, that these deaf-mutes cling to, and it is by these that they recognize or guess at what has been spoken. The more points of connection they find in what has been spoken, and the more familiar the words and sentences, the greater their accuracy in completing, comprehending, and repeating. They repeat a familiar *phrase* with less hesitation than an isolated *word*, and a noun *with* the article more readily than the same noun *without* the article. The same conditions exist in this process of hearing as in the process of lip-reading. In the latter the deaf-mute recognizes fragments only of what is said, and it is his task quickly to supply the missing parts and to hit upon the correct interpretation. When familiar words and phrases are used he performs this task with comparative ease and accuracy, but when new expressions are employed he is nonplussed.

During the last few years I have experimented repeatedly and carefully with such of my pupils as had some hearing. These *experiments* were not aural *exercises*. I

found that they could recognize through the ear familiar phrases with considerable accuracy, while as soon as I used new expressions and *single words* their ears were embarrassed. Thus "leak" became "weak;"* "take air" was rendered "take care," while the sentence "Immanuel Kant lived in Königsberg" was rendered by two of the boys as "A man can't live," the boys thereupon turning around and facing me to indicate that they had reached the end of their tether. A year later, after these boys had learned something of Kant and Königsberg in their geography lessons, they were able to repeat the same sentence correctly. To-day I made similar experiments, leading to the following results: *Teacher* (standing behind several of the pupils): "An axe." *Pupils:* "A box," "An ox." *Teacher:* "A mouse." *Pupil:* "A house." *Teacher:* "The hose blows on the bush." *Pupils:* "The rose grows on the bush," "The rain flows on the bush." *Teacher:* "The hunter shuts the log." *Pupil:* "The hunter shoots his dog." *Teacher:* "Snow is cold." *Pupils:* "The snow felt cold," "Snow is cold." *Teacher:* "The bow shot at its mark." *Pupil:* "The snow fell in the dark." *Teacher:* "The barber bit him wildly." *Pupil:* "The papa hit his child." *Teacher:* "The seasons pass, the year goes round." *Pupil:* "The seasons pass, I walk around." *Teacher:* "All men must die." *Pupil:* "All men must die."

The careful reader will easily perceive what I have been trying to prove from these few examples. It will be readily seen that it is at least premature to speak of "verbal and sentence hearing" in deaf-mutes of this class. For what they actually hear is limited to the vowels and to the rhythmic conditions in word and sentence. When such pupils in the course of time recognize familiar words and phrases through the ear, it is not

* Throughout this paragraph analogous English expressions are substituted for the illustrative words and sentences of the original.

the perceptive capacity of the auditory organs that has been increased, but, on the contrary, we have to deal with the development of the apperceptive process—with a manifestation of the quickening intellect. It is not that *deaf-mutes* learn to hear and speak by virtue of these auricular exercises, but rather that the *partially deaf apparently* learn how to hear *better* by means of systematic instruction in speech and language.

These circumstances thus explained ought to be familiar to every deaf-mute teacher, and therefore our Viennese colleagues should have felt it their duty to state the case plainly to Professor Urbantschitsch and his disciples, instead of encouraging them in the belief that the pre-existent hearing was a product of their auricular exercises. And if now some of the teachers at Vienna attempt, in print or otherwise, to make proselytes to their creed among the brethren of the profession, they should first prove that their deaf-mute pupils hear better, speak better, and are more efficient after the introduction of the acoustic exercises than before. They must separate from their artificial results the natural development of the hearing, which would certainly have been attained by systematic instruction in speech and language, and, after this process of subtraction, demonstrate that there is an appreciable increment of hearing. The exponents of the method have, however, failed thus far to submit this proof.

For many years I had given special attention to the partially deaf, and it was therefore a cause of great satisfaction to me when, in the autumn of 1895, I was able, with the sanction of my superiors, to visit the institutions at Vienna. I entered these schools full of high expectations, but the importance of the subject compels me to make the unqualified confession that I was sadly disappointed. The alleged success of these auricular exercises had led me to expect that the pupils of the Vienna Institutions would be conspicuous for a clear articulation, a

marked command of language, and therefore a comparatively high mental development. But of all this I could discern nothing. In fact, I think I am simply stating the truth when I maintain that the Vienna Institutions are perceptibly inferior in their worth to many other deaf-mute schools, in which no auricular exercises whatever are employed. But what struck me most as strange at the Döbling Institution was Mr. Lehfeld's statement that these auricular exercises had lately been somewhat neglected for lack of time. Mr. Lehfeld also makes a similar statement in his latest article ("The Auricular Exercises at the Döbling Institution according to the System of Professor Dr. Urbantschitsch," published by the author), in which, on almost every page, he lays stress on the "beautiful results" of the auricular method. In the face of the importance which the Döbling Institution attaches to auricular exercises, this contradiction is hard to understand.

I must agree with Mr. Lehfeld when he says, on page 27 of the article mentioned: "In spite of the greatest assiduity and painstaking care on the part of the teacher, it cannot be denied that the articulation of the deaf must be stigmatized, in many cases, as discordant, harsh and rasping, and as understood only with difficulty. Therefore it should be our great object to make the speech of our pupils as clear and harmonious as possible. If we find the auricular exercises helpful toward this object, it is the duty of the teacher to employ the same in order to deprive these well-founded criticisms of the articulation of the deaf more and more of their force," etc., etc.

The defects in the articulation of the deaf here particularized exist not only in "many cases," but rather in *most cases*, and, therefore, Mr. Lehfeld, if he really believes in the efficiency of the method he recommends, would have every reason to make the most extensive use of it. But it is now universally recognized that dumbness is a result of deafness, and every expert knows how time-

absorbing is the task of bringing the deaf to even a fairly intelligible articulation. If, now, Mr. Lehfeld believes he has in these acoustic exercises found a means to restore hearing, at least partially, it is evident that the results of deafness would disappear in an equivalent measure, and the whole work of instruction would be simplified to such a degree that, instead of being a waste of time, efforts in this direction should be regarded as a saving of time. But there is room for the suspicion that Mr. Lehfeld is beginning to lose confidence in his own skill, for Dr. Urbantschitsch, according to the latest reports, has transferred his auricular experiments from the Döbling Institution to the Hebrew Institution.

Judging from the reports scattered broadcast from Vienna concerning the auricular method, I was prepared to hear much noise on my visit to Döbling. On the contrary, I found the work of instruction as monotonous here as in any other deaf-mute school. Only once did I hear, for the space of about thirty seconds, the drawling notes of an accordion in an adjoining room, and as I set out to investigate, the concert had already come to an end. Mr. Lehfeld, however, was so accommodating as to prepare a special auricular exhibition, inviting the regular audience of Mr. Urbantschitsch to be present, and exhibiting the partially deaf pupils of the intermediate and upper grades. The respective teachers introduced the pupils one by one with a short speech, almost identical in each case, and somewhat like the following: "This child entered school with the ability to hear noises. By degrees vowel hearing was developed, and he can now hear words and sentences;" or, "Let me introduce here a child psychically deaf, who, on entering school, had vowel hearing, but has now attained to verbal and sentence hearing." After these introductory remarks, the teacher, standing behind the pupil, would yell the vowels and certain words and sentences into his ear, the child repeating sometimes

correctly and sometimes incorrectly. The disciples of acoustic science followed the demonstration with the greatest interest, now and then staring at each other in awed astonishment, and after a *séance* of nearly two hours they left the school under the delusion that deaf-mutes had had their hearing restored by means of auricular exercises.

The reader who has followed me carefully will easily perceive that we have here to deal with a fatal mistake calculated to rob the deaf child of his precious school time. During the exhibition I have just described, the majority of the pupils were left unemployed, and those who were exhibited gained nothing. The result of the exhibition was not to explain auricular exercises, but solely to demonstrate the *existing* degree of hearing, as well as the extent to which the pupils had been enabled by their mental and linguistic development to utilize, in understanding speech, the hearing they possessed. The exhibitions at Döbling presented nothing remarkable, for any experienced teacher can reproduce at pleasure with some of his pupils everything that was accomplished there. I therefore could not help hinting to Mr. Lehfeld, at the close of the exhibition, that I could repeat the whole performance at any time in my own class, and that, too, *without acoustic drill.*

Among the thirteen pupils of my class there are six who can hear their own voices and can recognize the voices of their classmates. I will guarantee that I can give an exhibition with four of these pupils in a room as dark as Egypt, and standing at a distance of from two to four yards, that will discount anything that the Vienna representatives of the aural method may have to offer. These children, as a matter of fact, entered school absolutely dumb, and if after six years' of instruction they have acquired the ability to comprehend speech with considerable accuracy through the ear, it is simply the result of sys-

tematic teaching. These children have not had their hearing restored by auricular exercises, but rather a systematic course in articulation and language has endowed them with the ability to use more and more extensively *the hearing they had always possessed.*

The German school of deaf-mute instruction is in danger of being burdened with a new fallacy, and, therefore, I beg leave, humbly and respectfully, to invite the Vienna defenders of the auricular method, as well as the authorities, to investigate the accuracy of my statements and deductions. I feel all the more justified in making this challenge, as already a certain disposition has been manifested on the part of the authorities to offer up victims on the altar of a theory whose treacherous plausibility is calculated to convince even an expert.

My arguments might produce the impression that I regard every intentional effort to influence the scanty residue of hearing in our deaf-mutes as useless. Far from it. In my opinion, the Viennese agitation may prove a great blessing to a part of our pupils, provided that the exercises do not degenerate into a farce, and do not start with the avowed purpose of actually creating hearing in the deaf, but rather of impressing any already existing hearing into the service of language acquisition.

Any auricular residuum is of the greatest importance in the education of the pupil, and it is, above all, of incalculable value in the acquisition of speech. Measures may be taken looking to the employment and full utilization of such hearing so that the pupil may come into possession of our language in the most convenient, shortest, and quickest way, and may, as early as possible, awake to the fact that articulate sounds serve as a medium of thought. Among these measures we must count the application of a suitable trumpet even in the development of the first rudiments of speech, the trumpet being so constructed that the pupil may hear the sound of his

own voice and compare it with the voice of the teacher. According to my own experience, the use of such ear-trumpets cannot but be recommended, and, at the same time, I would advise that the children be provided with them, not only during school hours, but also during their leisure time, so that they may make vocal and auricular efforts at their own pleasure and with leisure. Nor is it to be apprehended that the children will thus destroy their hearing by immoderately stimulating the organs. The pupil himself speaks only so loud into the instrument as is requisite to his aural capacity and agreeable to himself. The teacher, of course, must be carefully considerate of the degree of hearing that may exist, and avoid causing pain by speaking too loud. The child learns by comparing his own tones with those of the teacher—with true deaf mutes, however, this is but seldom the case—to adjust his vocal cords with precision, his voice will become more natural, and his speech will not be lacking in that harmony which is generally so much wanting in the articulation of the deaf.

A more important matter would be to instruct the partially deaf in special classes. As long as partially deaf children are instructed in the same classes with *bona fide* deaf-mutes, and receive the same treatment as the latter, the hearing they possess, together with their other gifts and capacities, are not sufficiently utilized and taken advantage of. The partially deaf could be developed much more quickly in mind and speech if they were not held back by the totally deaf, and that, too, from the very first to the very last of their school days. Such a separation has been recommended for years, not only by teachers of the deaf, but also by experienced aural surgeons. Professor Tröltsch, the famous aurist, years ago, made the following remark concerning the partially deaf: "One must not forget that among the deaf, *i. e.*, the pupils in the deaf-mute institutions, not all are deaf, that is, wholly

devoid of hearing. Many of them respond to loud noises. But, under existing circumstances, deaf children with even a comparatively high degree of hearing must be taken to these institutions. These children, however, are not on this account strictly deaf-mutes. There is little doubt that in the future we shall have special schools in which the education of the partially deaf can be conducted in the proper manner."

In my opinion the time is now ripe for the establishment of such schools, and for this we must thank the agitation originating in Vienna. In Denmark such a division of the deaf into special classes has already been effected, the partially deaf being educated at Niborg, the bright and ordinary *bona fide* deaf-mutes at Fredericia, and the dull deaf-mutes at Copenhagen, each class according to appropriate methods. It must not be overlooked that such a division will meet with difficulties in larger states, but it is really only a question of time. At all events, such a division is even now practicable in the big schools with from 200 to 300 pupils. All that is needed is the willingness of those in charge.

In my opinion it would therefore be expedient—

1. To instruct the deaf who enter school with some hearing, and also those with more or less ability to speak, in special classes.

2. To furnish these classes with suitable auricular appliances which may render to the ear a service similar to that which glasses render to the eye.

3. To provide these classes with a teacher having vigorous vocal organs, who can thus without fatigue constantly train the feeble hearing of his pupils.

We must acknowledge that the credit of having called emphatic attention to the circumstance that there are pupils in our German schools for the deaf who may properly be said to hear belongs to our Vienna colleagues. This fact, I regret to say, has generally been intentionally

suppressed in the profession, the object being to create interest among the public and the authorities in a method whose results are in a very large measure due to our kind foster-mother, Nature.

If a one-eyed person may be called a king among the blind, we may with the same license say that one who has some degree of hearing is a prince among the deaf. It does not require any special intuition or acquaintance with the art of teaching the deaf to see that it is much easier to reach the minds of such children than those of true deaf-mutes; it is evident, above all, that the partially deaf occupy a very different position, in regard to speech, from the totally deaf.

With the partially deaf we must also rank those children who became deaf after acquiring speech, and who therefore entered school able to speak. It is by means of these "semi-mutes" that for many a day visitors to our schools have had the wool pulled over their eyes. It is these pupils who stand in the foreground at public exhibitions and on other occasions and cause such sensation with their attainments in articulation. With these children the method now in vogue achieves really splendid results, and therefore, as I said in my work published in 1889, "The Deaf-Mute and his Language," "The method now in vogue fits these children like a glove." But we must remember that the semi-deaf and semi-mute constitute a comparatively small part of the children entrusted to our care. Under existing methods of instruction what is the fate of the true deaf-mutes and of the many who are of feeble capacity?

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[TO BE CONTINUED.]

THE CORRELATION OF INSTRUCTION AND ENVIRONMENT.—II.*

RATHER in the spirit of inquiry than with any desire to dogmatize, the present article will deal with a few applications of the principles stated in the previous article. The opinion was therein expressed that the greatest fault of the majority of teachers of the deaf is too much abstract teaching, or the failure to correlate properly instruction and environment. We do not build directly from and upon the pupil's experience with sufficient care. We are especially apt to neglect the immediate and direct association of language forms and number symbols with clear, vivid, actively present mental imagery. The source of this error is the failure to study the child's mind sufficiently and take its contents as the basis and predetermining factor of each new step in instruction. The result is that we are constantly trying to teach ideas, or symbols of ideas, in such a way that the pupil can perceive no clear or essential relationship to his previous experience or present knowledge. If this is the case, then those ideas are not likely to become accurately and clearly associated either with the symbols representing them, or with other ideas of their class previously acquired, and therefore through false associations they will often become stumbling-blocks, rather than stepping-stones to higher and broader levels of thought.

In the development of mental power we are hardly more concerned with the giving of new ideas than with the proper inter-association of these and old ideas along lines of true generic classification or causative sequence; and in the teaching of language we are chiefly concerned with the permanent, and in all particulars accurate, association of the word symbol or sign with the thing signified. Though

* Continued from the January number of the *Annals*, page 32.

inseparable in practice, we may, in discussion, consider the latter phase of the subject as one of supreme importance to the teacher of the deaf.

Suppose a primary pupil is given a lesson in one of Miss Sweet's Language Series Books. He has but little trouble in learning the visual form of the word symbols. Comparatively speaking, he has plenty of ideas such as are expressed in the book. The great insuperable difficulty is that of easily and indissolubly associating each symbol or combination of symbols with its corresponding percept or concept. In the lesson assigned, the new words are generally briefly explained by the teacher. But even after the most exhaustive explanations the language still seems to the pupil artificial, and too often misty. No vivid mental imagery accompanies his reading of it, and the interest value of the story element in the lesson is completely lost because the main point is befogged in the mists of error and uncertainty. The next day a great deal of time is spent in having the pupil reproduce the language, in analyzing it, and in testing his knowledge of the thought conveyed. Unless under a very careful teacher, he is apt to learn word symbols much faster than he can properly associate them, and becomes in time an adept in writing with unfailing persistency the most exasperating jumbles of language. Meanwhile he is also likely to conclude, from the amount of memorizing and grammatical analysis required of him, that he can finally learn language by such memorizing and write it by rule, and fails to perceive the subordination of these valuable means to the far more fundamental principles of association. The underlying theory of the teacher upon this subject must inevitably have a far-reaching effect upon the pupil's conception of how the tasks set before him are to be accomplished.

There is of course no cure-all that will even approximately preclude such results as are indicated above.

Very little practical work renders apparent to the average teacher the extreme difficulty of leading pupils properly to associate and appreciate book language not descriptive of any particular experience of their own. Most of the abundant professional literature on the subject is devoted to the discussion of various devices for lighting up the darkness of the pupil's mind by an array of pictured grammatical analysis, or valiantly advocates the free use of signs to this end, with a few other minor aids. For instance, in the very practical series of articles recently published in the *Annals* on primary work, it will be noticed that great stress is laid upon the analytic study of text-book language by the use of complex diagrams, while little or nothing is said upon the importance of first giving in the greatest possible abundance language which shall call for the least amount of the distraction of thought and waste of time incident to explanation by diagrams and the abstractions of grammar.

It appears to me that such analytic teaching of book language in primary grades exactly reverses the true and natural process by which the mind should be prepared to associate word symbols most easily and perfectly with the root ideas represented. The more fully we can bring about the ideal conditions for such association, the more time and effort are saved to both teacher and pupil. It is clearly of the greatest importance that the first association of the word symbol or combination of symbols with the idea represented should be as nearly true and perfect as possible, since, if it is in any way false, numerous errors result, and the originally acquired impression becomes extremely difficult to change. Supposing this impression correct, its permanence will depend upon the degree of the attendant concentration of attention, and of the repetition under a variety of aspects which follows. In an untrained child concentration of attention depends more upon excited interest than upon the exercise of will power such as is necessary during the study hour.

It would seem that we minimize or directly disregard these tritely familiar principles when we require primary pupils to memorize the text-book language of stories about people and places and particular animals and things they have never seen, and expect them to reconstruct all these in imagination and imbue them with life and reality through the medium of vaguely understood symbols.

According to the principles set forth in this and the previous article, new word symbols should first come to the child as the representation of ideas previously excited and at the time actively present in his mind. In that case the symbols appear to him in their true light, as purely subordinate agents for the transference of thought, and therefore, in reading the language, he sees a great deal more than mere words. Undistracted by any difficult concurrent effort to imagine the forms and character of the things represented, the mind is left free to devote its whole attention to the proper association of the language with the thought, which is necessarily more nearly perfect than if unfamiliar book language were being interpreted. The element of spontaneity in such language as is the outcome of the daily common observations, interests, thoughts, and sympathies of pupil and teacher has a very great value in at once attracting the interested attention of the pupil. From week to week the vocabulary of the class can be as limited or as varied as the teacher thinks best. So far as we can decrease in this way the primary difficulties of interpretation, we are enabled to increase the volume of language given, or more particularly the amount of repetition, and thus take into better account the peculiarly fluent character of the English language, which led Sir Philip Sidney to argue that it was a "grammarless tongue."

It is not necessary to give any elaborate description of the numberless ways of putting into practice the princi-

ples above stated. Valuable suggestions along this line will be found in recent articles in the *Annals* by Miss Porter and Miss Moffat. The adaptation of kindergarten plays, action work, journal work, observation and object lessons, the description of elementary experiments revealing important facts in geography, physics, and botany, daily lesson leaflets, and a good weekly paper with plenty of local news are all valuable means to the end which we are seeking. From the fourth or fifth year on, I would especially emphasize the descriptive experimental work as an occasional very interesting substitute for journal writing, and an invaluable preparation for the later systematic study of the facts and subjects illustrated.

The important point to be emphasized here is that we use these valuable means intelligently, according to clearly perceived principles and a definitely outlined systematic plan of development. Like very sharp tools, they are necessary to the finest and most rapid work, but only ruin and disaster follow upon a blundering hap-hazard use of them. To the most successful attainment of the end in view it seems essential that the teacher prepare or adopt a carefully studied outline of model language forms, including especially essential verb forms to be taught; and that a class record be kept by which it will be possible to review under varying aspects the important new words, phrases, and idioms that have been given. Such records in connection with a thoroughly unified course of study will enable new teachers to review and continue the work of their predecessors with a minimum waste of time and useless repetition. It is also essential that the pupils be given daily the greatest abundance of properly adapted model language, to be copied and studied. Finally, to meet these general conditions, not simply well informed, but *specially trained*, teachers are required; and I believe the time is not far distant when the rising standard of our best schools will lead to the general acceptance of this re-

quirement. The same underlying theory that permits in some measure the predominance of the abstract text-book study of language will often lead to a like tendency in the teaching of arithmetic. One of the papers read before the Fourteenth Convention, while giving excellent practical suggestions on this subject, seems inclined to advocate the teaching of primary arithmetic as an abstraction, or, in other words, storing up the mind at this stage with unassimilated fact which is to be digested at some future time. After speaking of the mechanical part of arithmetic involved in computation, and the more strictly analytic or logical part which consists in applying the processes of computation to given problems, it says: "During these first years the pupil should commit to memory the multiplication table and the tables in denominate numbers. He should learn to add accurately long columns of figures, to subtract and divide without error. . . . I do not mean, of course, to devote these years exclusively to abstract work, but to make that predominate. . . . Just here I wish to say that in the solution of every problem there are only two essentials: knowing what to do and how to do it. Why it is so done is a pleasure to know, but by no means an essential." The intimation seems to be that the mechanical parts should be mechanically memorized without bothering much as to the "why." It seems to me that even in the first steps in arithmetic nothing can be more fatal to later sound and rapid progress than by our methods to give the pupil a fair chance to conclude that it is a pleasure, "but by no means an essential," to know the *why* of his work. Reference to an arithmetic which is used in at least one school for the deaf will make clear the import of the above-quoted statements. It follows the old arrangement of numeration, and the four tables in succession with practice work on numbers up to millions, then denominate numbers and fractions treated separately and case by case. Probably a majority

of the profession agree with the conclusions quoted and follow this general order. It almost invariably lays great stress upon the different successive mechanical processes, summed up by abstract rules, worded or unworded, which are shown to apply to each "case;" and therefore fails to hold under a constant and steady light the one fundamental principle that all arithmetical work is some form of addition or subtraction with various concurrent transformations of parts to render these processes applicable.

If the main argument of the previous paper is sound—namely, that as far as possible the development of the idea through experience should precede and lead up to the symbolic representation of it by the child—then, to teach a pupil something of quantitative reasoning, we should first require him to experiment a great deal with various modes of estimating and comparing actual quantities, as by the numbering of objects, and the measurement of distance, bulk, weight, etc., by different standard units. I would begin with denominate tables as soon as numbers up to fifty had been mastered, and base a great deal of concrete practice work upon these tables as higher numbers are taken up. Only such tables or parts of tables as are perfectly within the comprehension of the pupil are to be considered. Each year the subject is reviewed and more difficult tables and applications taken up. In exactly the same way, the idea of fractions is taught very early in connection with division, then reviewed each term in more and more complex relations—first fractions to sixths, next to twelths or twenty-fourths, and then decimals to thousandths. Each step is demonstrated objectively by both teacher and pupil, and attention is continually focused upon the fundamental principle stated above by the constant use of the equation both in concrete and abstract form. In this way the child is familiarized very early with the one primary instrument of all mathematical reasoning. The gradient

steps of progress depend upon the possible degrees of the simplification of processes, and not upon the usual arbitrary or logical divisions of the subject. Practical tests in the school-room soon convinced me that this method of constantly considering the whole subjects of arithmetic from the point of view of the child's capabilities of conception insures a great saving of time and a much more complete mastery of principles than is otherwise possible. Always the ability to illustrate objectively, by drawing or otherwise, each process taken up should be the final test of understanding, and every effort should be made to have each pupil reach any required induction through his own measurements, and, if necessary, hundreds of illustrative diagrams.

In giving the greatest possible reality to the subject it will be found a helpful exercise to have pupils estimate the value of various articles which they use, beginning with the first cost of production, and tracing the raw material through depots, factories, custom-houses, and wholesale and retail stores. In this way we may approach from the concrete practical side many of the important facts of production, transportation, and distribution, the principles of taxation, the progress of invention, etc. Other valuable series of problems may be given by comparing geographic conditions of temperature and rainfall, or of production, wealth, and population, with local conditions familiar to the pupil's experience, and illustrating the comparisons by broad lines drawn to scale in the proper proportions. In this way pupils can be given more or less definite standards of comparison with which to associate, and by which to weigh and realize clearly, facts learned in other studies or general reading. It is obviously impossible for text-books to give satisfactory problems of this kind. With a supply of blank business forms, check-books, paper money, etc., various transactions in wholesale, retail, banking, and real estate business may

be conducted, the teacher being the principal stockholder and the director of all corporations.

Here, as in language teaching, the most essential point to be observed is the proper subordination and adaptation of this varied subject-matter to a systematic general plan according to definite purposes and clearly perceived principles.

If by a wise use of such devices we can constantly bring the newly acquired ideas of the pupil into close and accurate association with his ever-growing body of individual sense-experience, there will result a stronger and saner mental product than is possible through abstract teaching and a slavish following of text-books. On the other hand, there will be less reckless reasoning out of all relation to carefully observed fact, and less parading of the language of history, physiology, and physics, with a corresponding mental imagery so vague and shadowy that little of it remains after the first or second anniversary of graduation.

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THEN AND NOW.*

THE Maine School for the Deaf is a sufficient justification, to any one who has watched its work, of the method of teaching which it exemplifies. It is very interesting to compare the results of the present "Combined System" and the former "Pure Oral Method," and this can be the more easily done since several of the teachers labored with no less zeal and devotion to carry out the old method in the earlier days of the School.

*The writer of this article lives just across the street from the Maine School and has watched its progress with close interest from the beginning.

To judge of the success of a method, it is necessary to understand clearly the objects to be attained by it. It may be said of all education that its purpose is to develop the mind, but in the case of deaf children the expression has a peculiar force. The child who never has had hearing, or who has lost it at an early age, is necessarily ignorant, no matter how keen his mental powers may be in reality, of many things besides language which a hearing child of the same age has learned unconsciously, and the process of development must begin farther back. The imperative need is a ready means of communication between teacher and pupil.

There are three modes of conveying ideas to the deaf child: signs, words spelled either by writing or by the manual alphabet, and spoken language. The sign-language has the great disadvantage of being unintelligible, except in its simplest forms, to those who have not studied it with care, and those who use it must therefore communicate with hearing persons by the inconvenient, and sometimes impossible, mode of writing. But for teacher and scholar it furnishes a ready means of communication before language is understood, and an invaluable help in its acquisition. The manual alphabet is open to the objection of not being generally known, but it can be very quickly and easily learned, and can be used where writing is impracticable.

But if the child is to read words, says the oralist, why not read them altogether from the lips, instead of from the hand, and so acquire the power of conversing with any one? That the art of lip-reading should be taught as far as practicable, the advocates of the Combined System firmly believe, but that it should be made the chief means of instruction seems to them, on account of the slow progress which its extreme difficulty involves, a sacrifice of the essential to the non-essential, the important point being not so much the ease with which the child can express himself, as the kind of self to be expressed.

The difficulty of lip-reading arises from the fact that, while the vocal organs take a different position for each sound, these differences are not always visible externally. Let any one who wishes to appreciate the condition of a child taught chiefly by the lips imagine himself to possess a very small French vocabulary, and then to be required to read a book in that language, in which the same character may stand for either *b*, *m*, or *p*, while another represents indifferently *d*, *n*, or *t*, and *c* and *g* are often omitted altogether. This is a fair parallel when words are spoken clearly and distinctly, but in ordinary, careless conversation additional difficulties arise, which may be understood by supposing that many letters are badly printed, and whole words occasionally blurred.

Such being, briefly stated, the three modes of communication with the deaf child, the advocates of the Combined System believe that, with a task of such difficulty and importance to be accomplished, the wise course is to use each and all as occasion demands, lest by rejecting any they run the risk of sacrificing the highest good of the child to a theory.

If this method is really superior, the proof should appear in its results. How, then, does the Maine School, judged in both cases by the average scholar, not by special cases, compare with its Pure Oral predecessor?

The first difference to be noticed is in the *morale* of the school. The teachers agree in saying that the children are wonderfully well behaved, and that in spite of the large number brought together, some seventy, of all ages, discipline is easily maintained. Formerly, with half as many pupils, a very different state of things prevailed. There are of course various reasons for this, but one which contributes very largely toward the result is that the readiness with which ideas can be given to the children renders it much easier to inculcate good morals and manners, while their increased general development makes them far more amenable to reason.

Another difference to be noticed is that the listlessness, not merely in study, but in play, that surprised the visitor to the Oral School, has entirely disappeared under the new system. Formerly, while there were marked exceptions, the general impression was of a lack of vitality. For example, at one time a number of the boys were allowed to spend their recess in a room in the school building which was provided with hand-swings, parallel bars, and other gymnastic appliances dear to the heart of every genuine boy. These little fellows enjoyed it for a few days, and then went back to their old habit of spending their recess in talk—always, be it understood, in signs, for the younger children, and the older ones with few exceptions, used among themselves nothing but an imperfect and inaccurate system of signs, which had gradually grown up in the school. The want of a playground seemed to the visitor one of the many serious objections to the former quarters of the school, but when it was transferred to the present building very few of the children availed themselves of the chance for play offered by the large yard, which now is daily filled by a merry company of urchins, of whom listlessness, in work or play, is the last quality that could be affirmed. For this change also there are various reasons, best expressed in brief by saying that more normal conditions have produced the natural result of more normal characters.

It is interesting to notice that, while speech and lip-reading are made so much less prominent in the school programme, the average excellence of performance in that respect is equal, if not superior, to that attained by the former system. In this, as in other directions, the children are far better fitted to profit by their lessons than where the constant struggle to understand left them, far too often, tired and cross.

The Pure Oral method does great injustice to one class of children, the naturally poor lip-readers, who are often

equal, or even superior, in general mental power to their more fortunate companions. Lip-reading requires quickness and keenness of observation, and a mind able to work rapidly—qualities often lacking in childen whose memory and reasoning powers are of a high order. Under the Combined System they can be met on their own ground, and their faculties can be adequately developed.

Among deaf children there will always be found an unusual proportion who are more or less deficient mentally, either because their deafness is only one phase of a generally imperfect organization, or because their education has begun too late. No class in the Maine School is more interesting than one made up of these backward pupils, to whom the Oral method is acknowledged, even by many of its most zealous advocates, to be wholly unsuited. No effort is made to teach them to speak, but some of them use the manual alphabet with great ease, and their command of language, as shown by the little stories of the day's doings which they write for their teacher, actually equals that of children of average ability who had been under instruction for the same length of time in the former school.

It would be interesting to describe some of the other features of the school—the class in Manual Training, where the boys make all manner of pretty and useful things, and which they enjoy so much that if one of them is idle or inattentive, it is only necessary to suggest giving his place to some one not yet admitted to the class; the cobbler's bench, made by the boys themselves, where the shoes for seventy pairs of active feet are mended—and well mended—by a busy young cobbler; the sewing classes, where the girls learn to make and mend their own and the boys' clothes, and numerous articles required in the household; the lessons in various domestic occupations, which are fitting them to employ themselves usefully and happily

at home. But all these, and many more pleasant things, may be seen by the visitor, and it is safe to predict that the first visit will not be the last, so interesting is it to see what wise methods, carried out with skill and devotion, can accomplish for lives which would otherwise be deprived of so large a share of activity and happiness.

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A SUGGESTION TO THE FIFTEENTH CONVENTION.

In the last issue of the *Annals* I ventured to offer some thoughts regarding a possible "Science of Deaf-Mute Education," but made no definite suggestion. Since those paragraphs were written, however, further reflection has tended steadily to convince me that the time for action in that direction has arrived. At the same time a very natural and practical plan of procedure also has suggested itself. The nature of this plan and the near approach of the Fifteenth Convention have impelled me to risk a practical suggestion as a kind of supplement to my recent paragraphs on the above theme.

Perhaps the matter in hand cannot be better introduced than by a certain quotation. A writer in the autumn number of *The Little Deaf Child* criticises a statement of mine in a former article, entitled "The Modern Moloch," thus: "Truly this is an extreme statement, and one which cannot be accepted unless followed by others which bear it out and give it the advantage of a thorough proving. If the writer has made a careful and statistical examination of the oral system as compared with the combined system, and if in the course of such an examination he has discovered that pupils trained by the oral system are mentally, morally, and physically inferior to those

who have not been so trained; if he has personally visited the oral schools of Germany and France, and those of America, which have cheerfully accepted the oral system, and have given it a thorough and efficient test; if he has thoroughly tested also the work which is being done in private schools and in public day-schools in England and America; if he has looked carefully into the subject-matter taught in such schools, and has carefully compared school curriculums, he will no doubt be able to give valuable data which shall throw definite light upon the subject." Now, aside from several minor implications, I wish to say frankly and decisively of this general criticism that it is absolutely just and well founded.

To the extent of my failure to accomplish the above-enumerated investigations thoroughly and fully, any statements of mine regarding the oral system were necessarily *unscientific*. But, observe, the criticism cuts both ways, and stands true of all who have made statements in like manner without having effected full investigations, as above described. Am I or is any other single individual, however, to be blamed for this failure? Not at all, for the simple reason that it is well-nigh impossible for any single person to accomplish such a complete scientific inquiry. It must be for our profession *as an organized whole* to undertake and carry out that work.

I have employed the above citation because it furnishes a pointed illustration, entirely at my own expense, of a truth which needs to be driven home with all possible emphasis. It is not a very palatable one, but only too easily verified. I refer to the essential weakness of four-fifths of all our professional controversy, namely, its dependence upon the appeal to "experience," as if experience was never warped from the truth by prejudice and other influences; its resort to mere official authority, whose assertions are accepted without the backing of a single definite fact; its constant use of mere arguments "from

the study," unsubstantiated by any fruits of real research. Some may doubt the reality of this, but, if so, let them not sit in idle ease and deny it off-hand, for in that case they would themselves become clear illustrations of its truth.

Instead, let them go and read all the past issues of the *Annals*, the "Proceedings" of past conventions, and other similar literature, and they will discover an astonishing repetition of old arguments and opinions from decade to decade, constant balancing again and again of fresh personal assertions, fresh appeals to the authority of experience, sweeping generalizations from one or two "cases" only, and all the rest. Not entirely inapplicable would be Hallam's words descriptive of the scholastics: "The scholastic mode of dispute, admitting of no termination, and producing no conviction, was the sure cause of skepticism. . . . What John of Salisbury observes of the Parisian dialecticians, that after several years' absence he found them not a step advanced, but still engaged in urging and parrying the same arguments, was equally applicable to the period of centuries. After three or four hundred years the scholastics had not untied a single knot, nor added one unequivocal truth to the domain of philosophy." All this would be too severe, of course, as applied to our own past controversies, for we have certainly made considerable advance, but there is unquestionably sufficient parallelism to mortify us greatly.

True, we have ample reason and excuse for this state of things in the past. A great thinker, J. S. Mill, says: "Practice precedes science; systematic inquiry into the modes of action of the powers of nature is the tardy product of a long course of efforts to use those powers for practical ends." Precisely! Just so has it been in our own sphere. But surely we have now made sufficient progress in "practice" to take a step forward and attain the level of science, bringing to an end those persistent

controversies which seem to "admit of no termination, and produce no conviction." Let us here proceed to consider, at any rate, one plan by which we might successfully, perhaps, accomplish such an aim.

In the published "Proceedings of the Fourteenth Convention," turn to pages 217–221, where you will find the text of the Constitution adopted on that occasion. Under Article II you find that the objects of the Convention shall be to secure harmonious union, to provide for meetings from time to time, and "to promote by the publication of reports, essays, and other writings the education of the deaf on the broadest, most advanced, and practical lines," etc. Very good, so far. But let us now turn aside for a moment to the consideration of certain other celebrated organizations, in the observation of which we may gain some suggestive points.

Every one has heard of the British Association for the Advancement of Science and of its American contemporary, as well as of other famous scientific societies, such as the Royal Astronomical Society, the *Congrès Médical International*, etc. For what objects do these societies exist? Investigating this matter, I was much struck with the parallelism in this respect between these societies and our own Convention, excepting in one important particular.

In the first place, each of these societies aims (and here I may partially quote the exact words of our own Constitution) "to secure the harmonious union in one organization of all persons actually engaged in" prosecuting scientific research in their several spheres. In the second place, each society aims "to provide for . . . meetings from time to time with a view of affording opportunities for a free interchange of views concerning" the discoveries and theories of scientific explorers. Finally, each society seeks "to promote by the publication of reports, essays, and other writings" the develop-

ment of scientific knowledge. It is in the difference between the respective meanings of "education" and of "science" that the parallelism fails to hold. Nevertheless, is it not a striking and suggestive one as far as it goes?

We labor in a certain sphere of activity, wherein certain fundamental disputes continue to persist; wherein many points of importance remain very obscure, and wherein, therefore, the accurate knowledge born of truly scientific research is emphatically needed. Not merely as educators of the deaf, during the period they spend within our school doors, but as friends anxious to advance their social status in every way, it is of vital significance for us to obtain sound, reliable knowledge regarding the sources of deafness, the influences that increase or decrease it, the various types or degrees of it, and especially the educational methods best fitted to prepare the deaf for a happy, successful discharge of all the functions of a social being. But you may write it large upon your tablets that we can never attain that goal without a thorough, patient exploration of every nook and corner of our special field, collecting systematically all the results, and from them evolving a scientific body of indisputable truths. This is the Baconian method, so marvellously fruitful of results wherever tried.

But how are we to go about this business? No Society for the Advancement of Scientific Knowledge regarding the Deaf as yet exists anywhere in the world. This means that no central agency has yet been established expressly to stimulate original investigation, to map out lines of inquiry, to co-ordinate scattered results, and thus render isolated individual labors effective for the steady advancement of our knowledge as a whole. There is nothing to kindle enthusiasm and arouse definite co-operative efforts among our widely scattered workers. And should statistics, test results, accounts of various observations,

etc., be forthcoming at the present time, there is no express agency, with a fund behind it, to publish the same in available form for all students in our profession.

Should, then, a special scientific society be formed for the furtherance of such an object? Not by any means, it seems to me. We have enough of organizations already. To add a new one would only distract and dissipate our forces, instead of economizing them by concentration. Have we not already at hand two organizations which, by sympathetic co-operation, would cover nineteen-twentieths of the English-speaking world at least, namely, The Convention of American Instructors of the Deaf and The (British) National Association of Teachers of the Deaf?

In the light of all the foregoing, then, surely it is a suggestion worth considering, at least, that the coming Convention at Columbus should do something like the following:

1. Take steps to secure an amendment of its Constitution, under Article II, such as shall add to the objects already enumerated a further one, explicitly stating that the Convention seeks to encourage scientific research among its members, within the limits of its sphere, with a view to developing scientific knowledge of all matters comprised therein; and

2. Whether the above should be thought necessary to the main purpose or not, at any rate organize a special committee or scientific section which shall take in hand the above work, arranging for investigations at local centres along definite lines, inviting and encouraging individuals to undertake such inquiries, collecting and preserving the results, and reporting the same to successive Conventions in the future or securing publication of them in available form for all interested therein.

By doing something like this, the Convention would simply assume in explicit terms and by effective arrangement the functions of a scientific society, so far as con-

cerns our own field of knowledge. We certainly need some such central agency for the purposes already pointed out. That inestimable gain would soon appear as the outcome of such a definite move on our part scarcely admits of dispute.

With all these thoughts in mind, look forward to what is coming. On July 28th next there will meet in Columbus probably the largest assembly of the most successful educators of the deaf the world has ever seen. It will be our last great meeting within the century now swiftly ebbing away—a century no less remarkable in the annals of deaf-mute education than in all other departments of human endeavor. There will be present white-haired veterans, who have burned low the fires of life in the service of our cause, and again those destined to sustain and carry forward the good work far into the veiled years of the twentieth century—that coming time before which the thoughtful man of to-day bows his head almost reverently, while his heart beats quicker with the sense of coming achievements, great and beneficent, for the human race. What distinctive step in the line of manifest destiny could this great gathering of our forces undertake more significant and promising than to declare explicitly its purpose to begin the uplifting of our field of labor to the level of an empirical Science, creating simultaneously the necessary special organ for performing that function in our body politic?

It is a great opportunity that we shall have. The time seems fully ripe for the movement herein definitely suggested. Teachers and friends of the deaf, is it not time that the wearisome controversies that rend our ranks should be relegated to past history in the only way by which it can ever be done, namely, by an honest, patient application of the scientific method by ourselves to our own sphere of activity? In short, is not the proposition herein suggested, taken up and executed in some form or

other, simply reasonable, timely, and desirable? If so, let us carry it out forthwith. If not, make sure of the reasons against it, and come to the Convention prepared to urge them in open discussion.

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Principal of the Ulster Institution, Belfast, Ireland.

THE ELEVENTH CENSUS.—I.

THANKS largely to the earnest efforts of the Committee appointed by the Sixth Conference of Principals and Superintendents of American Schools for the Deaf, the enumeration of the deaf in the Eleventh Census of the United States, taken in 1890, was an improvement in some respects upon all previous censuses. The classification of the deaf made in the Tenth Census, so objectionable to them and their friends, by which they were grouped with paupers and criminals under the general head of "the defective, dependent, and delinquent classes," was discontinued; the inquiries of the census-takers were not limited to the "deaf and dumb," but were extended to all the deaf; the questions asked were more numerous and minute than ever before, and included some new details of considerable importance.

The results of the census of the deaf are published in the same volume with those of the blind, the feeble-minded, and the insane, but the several classes are separated as much as possible from one another. The portion relating exclusively to the deaf includes 75 tables giving a great variety of information of more or less value, 28 illustrative cartograms and diagrams, and a report of 34 large quarto pages by Dr. John S. Billings, the expert special agent of the Census Office for Vital and Social Statistics, who had charge of these special classes. The

tables relating to the deaf are more numerous than those relating to any other class.

While instructors of the deaf may congratulate themselves that so much was accomplished in accordance with their requests, it is a matter for regret that the recommendations of their Committee were not fully carried out. Several of the inquiries that the Committee suggested were omitted, and of the 63 questions that were in the schedule, all of which were, or ought to have been, asked by the enumerators concerning every deaf person returned, there were at least 35 questions, including some that were regarded by the Committee as especially important, of which no results whatever appear in the tables or report.

Though the Census Office followed the recommendation of the Committee in making inquiries concerning all the deaf, the results are not published in the form that the Committee desired and expected. Instead of giving the returns concerning the whole body of the deaf as one class, together with the age at which deafness occurred and other details which would have enabled us to determine readily those of them in whom as instructors of the deaf we are especially interested, the Office attempted to separate the "deaf and dumb" from the "deaf but not dumb," giving separate tables for these two classes. Probably this course was better than that of former censuses, which enumerated only the "deaf and dumb," and left the determination of the persons constituting this class largely to the enumerators, many of whom were men of little education or intelligence; but the results of the attempt to separate the two classes in the Census Office are not altogether satisfactory. Of the "deaf and dumb" the total number reported is 40,592; of the "deaf but not dumb," 80,616. Of the latter, 15,981 are said to have lost their hearing under twenty years of age. If the returns concerning these persons are correct, they probably belong to the class known as semi-mutes, or are deaf-

mutes who have been taught to speak in our schools for the deaf; 145 of them were reported as congenitally deaf, and 721 were pupils in schools for the deaf on the day the Census was taken. 55,370 persons "deaf but not dumb" are said to have lost their hearing when they were twenty years of age and over; with these we, as instructors of the deaf, have no particular concern. On the other hand, among those returned as "deaf and dumb" are 4,939 persons whose deafness is said to have occurred when they were 5 years of age and over; 1,677 of these are said to have been ten years of age and over when their hearing was lost, and 358 twenty years of age and over. With respect to most of these persons, especially those who are said to have lost their hearing after they were ten years of age, there must either be an error in the returns of the ages at which hearing was lost or in their classification as "deaf and dumb." On the whole, for practical purposes, the arbitrary classification adopted in the census of 1880, which included among the "deaf and dumb" all of the deaf who lost their hearing before they were sixteen years old and excluded those whose deafness occurred at a later age, seems preferable to the attempt of the census of 1890 to divide the deaf into two classes.

Among the instructions given to the enumerators concerning the enrollment of the deaf were the following: "The questions on this schedule are to be asked with regard to every person who is too deaf to be taught in ordinary schools for hearing persons, or who cannot hear conversation carried on in a loud tone of voice. If the person is merely 'hard of hearing,' or if there is doubt whether the deafness is sufficient to cause the disability above named, the person should not be entered on this schedule." Of course it is impossible to say how faithfully these instructions were observed. The great disparities in the numbers returned from different parts of

the country indicate that some enumerators gave a much wider latitude to the interpretation of them than did others. For instance, the proportion of persons "deaf but not dumb" returned from Vermont (3,207 per million of the total population) was more than five times as great as the proportion of those returned from Georgia (606 per million), and the proportion returned from the States of the North Atlantic division (1,620 per million) was nearly twice as great as that returned from the Southern States (860 per million). Was the former too high or was the latter too low? The statement made at Flint by Dr. Job Williams, Principal of the Hartford School, shows that in one instance at least the instructions to the enumerators above quoted were entirely disregarded and persons were entered on the schedule for the deaf who ought not to have been.* So long as the Census is taken, as it has been hitherto, by enumerators appointed for the occasion, without any previous training or experience and

* At the Fourteenth Convention of American Instructors of the Deaf, held at Flint, Mich., in 1895, Dr. Williams said: "When the Census report was received I found the names of eleven children of school age living in Hartford reported as deaf. One of these I know about, but I had not heard of the others. I thought it strange that there were so many deaf children here that I knew nothing about, so I proceeded to investigate. At the first place where I called I found a little girl playing near the house and inquired for the girl reported as deaf. She said that was her name. Just then the mother appeared, and when I stated my errand to her, she said, 'Oh! that is the child. Ordinarily she hears as well as anybody, but when she takes cold she is a little deaf from catarrh.' The next case had just graduated from the public school and had but slight deafness, if any. The next was a boy troubled with catarrh and at times somewhat deaf, but was making his grade regularly in the public school, and so on. At the last place I inquired of the gray-haired man who answered the door-bell for a girl of the name given, 'That is my grandchild,' said he; 'she lives on the next corner.' 'Is she deaf?' 'Oh no, she is only six months old.' 'But the census report gives a girl of that name deaf and living here.' 'Oh, well, that is my wife. She has had to use an ear-trumpet for some years.' I found one genuine case, and one I could not find at all. So much for the eleven cases on the list furnished me by the Census Bureau."

without any test of their fitness by examination or otherwise, usually as a reward for petty political services rendered to the party in power, accuracy in the returns is not to be expected. We can only hope that errors in one direction are balanced by those in the opposite direction, and that the average results may thus approximate correctness.

The following table* shows the number of the "deaf and dumb" reported for each State and Territory, with distinction of sex and color; also the number in each million of the total population:

States and Territories.	Total.	White.		Colored.		Number in each million of population.
		Male.	Female.	Male.	Female.	
Maine	627	346	281	.....	.....	948
New Hampshire	321	180	141	.....	.....	853
Vermont	241	133	108	.....	.....	725
Massachusetts	1,539	784	742	8	5	687
Rhode Island	162	79	77	3	3	469
Connecticut	499	272	220	2	5	669
New York	3,839	2,105	1,700	19	15	641
New Jersey	764	402	342	13	7	529
Pennsylvania	3,360	1,834	1,491	16	19	639
Delaware	98	53	39	4	2	582
Maryland	750	354	290	62	44	720
District of Columbia	124	50	46	19	9	538
Virginia	1,199	500	400	165	134	724
West Virginia	600	323	260	11	6	787
North Carolina	1,107	460	399	132	116	685
South Carolina	668	178	160	180	150	580
Georgia	860	277	266	179	138	468
Florida	190	64	48	47	31	485
Ohio	2,655	1,396	1,219	21	19	723
Indiana	1,837	996	809	21	11	838
Illinois	2,479	1,364	1,096	14	5	648
Michigan	1,547	823	716	5	3	740
Wisconsin	1,315	785	528	1	1	780
Minnesota	856	521	334	1	.....	658
Iowa	1,313	789	519	3	2	687
Missouri	1,998	1,046	888	44	20	746
North Dakota	92	51	41	.....	.....	504
South Dakota	171	97	74	.....	.....	526

* In this table the Chinese, Japanese, and Indian deaf-mutes, numbering 30 in all, are not included.

States and Territories.	Total.	White.		Colored.		Number in each million of population.
		Male.	Female.	Male.	Female.	
Nebraska	629	348	278	1	2	594
Kansas	1,152	629	497	15	11	807
Kentucky	1,362	650	565	87	60	733
Tennessee	1,112	467	433	124	88	631
Alabama	791	280	242	156	113	525
Mississippi	559	157	135	148	119	433
Louisiana	539	206	183	82	68	482
Texas	1,153	560	391	116	86	516
Oklahoma	26	13	12	1	.....	420
Arkansas	760	339	304	69	48	674
Montana	39	22	17	.....	.....	303
Wyoming	16	11	5	.....	.....	264
Colorado	205	113	90	2	.....	497
New Mexico	80	47	33	.....	.....	521
Arizona	15	9	6	.....	.....	252
Utah	108	58	50	.....	.....	519
Nevada	11	7	4	.....	.....	284
Idaho	31	17	14	.....	.....	367
Washington	116	64	52	.....	.....	338
Oregon	157	90	66	.....	1	500
California	490	290	197	1	2	411
The United States	40,562	20,639	16,808	1,772	1,343	648

It appears from the above table that the number of males exceeds that of females both among the white and the colored deaf-mutes. In each million of population of the United States of the same sex there were 702 male and 595 female deaf-mutes. Out of each thousand deaf-mutes there were 552.5 males and 447.5 females. The census returns of other countries show a similar excess of male over female deaf-mutes.

The proportion of deaf-mutes seems to be much larger among white people than among colored people. The number in each million of the white population of the United States was 681; of the colored population, including Chinese, Japanese, and Indians, 412. A similar disparity has been shown in all previous censuses. Dr. Billings says that "the ratio of omission was probably somewhat greater for the colored children than it was for

the white, but it seems fair to conclude that the ratio of deaf-mutism is decidedly greater among the white race than it is among the colored race."

The number of deaf-mutes in each million of the population, as shown by the above table, is greater than the corresponding number shown by the census of 1880 in Maine, New Hampshire, Vermont, Massachusetts, New Jersey, Delaware, Maryland, Virginia, South Carolina, Florida, Ohio, Michigan, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Kansas, Texas, Arkansas, Montana, Colorado, Arizona, Nevada, Idaho, and Washington; it is less than in 1880 in Rhode Island, Connecticut, New York, Pennsylvania, District of Columbia, West Virginia, North Carolina, Georgia, Indiana, Illinois, Wisconsin, Nebraska, Kentucky, Tennessee, Alabama, Mississippi, Louisiana, Wyoming, New Mexico, Utah, Oregon, and California. The greatest apparent increase in the ratio was in Maine (247 per million); the greatest apparent decrease was in the District of Columbia (413 per million). For the whole United States the apparent decrease was 27 per million. However, in view of the different way in which the classification of the "deaf and dumb" was made in the two censuses, and of the fact that over 4 per cent. of those returned in 1880 were reported by physicians who made no corresponding returns in 1890, a comparison of the two censuses in this respect has little value. In the intermediate census which three States, Michigan, Rhode Island, and Massachusetts, took in 1885, the number of deaf-mutes returned and the ratio to the whole population were considerably less than in either the United States census of 1880 or in that of 1890. No doubt the extra pay allowed to enumerators by the United States for the statistics concerning the deaf, though it was far too small really to compensate for the additional labor involved in making faithful returns, was an incentive to greater fulness of numbers; it may

possibly, in the case of unscrupulous enumerators, have even been a temptation to greater fulness than was justified by the facts. But, inasmuch as the proportion of deaf-mutes to the whole population, as shown by the census returns of the United States, is below the average of European countries, it is probable that the omissions were more numerous than the erroneous additions.

E. A. F.

[TO BE CONTINUED.]

AMERICAN WARS.

EVERY school teaches history more or less, and children find it an interesting study when presented in a proper manner. In a former volume of the *Annals* (xl, 269–273) will be found an article on "The Colonial Period of American History," with a chart and cards, by Mr. D. F. Bangs, Superintendent of the North Dakota School for the Deaf, the use of which and the success obtained therefrom have suggested the accompanying table of American Wars. It is prepared on the same plan, care being taken to make the accounts of the various wars as uniform as possible, and also to show their connection where any exists. The facts have been gathered from various sources—text-books in history, readers, books of reference, newspaper clippings, and pamphlets. Government reports from the Indian Bureau have been especially helpful regarding the Indian wars. From a glance at the table it would seem that history is nothing but a record of wars, but it is really not so. That is only one subject selected from a host of others. I give outlines of those wars which are more or less mentioned in almost every text-book, and also of those which should be fully studied and understood by older pupils. Other wars,

such as Shay's Rebellion, the Whiskey Insurrection, the Mormon, Modoc, Sioux, Apache, and other minor wars, are left out; but they can be studied in the same manner, if the teacher so desires. The main object of the table is to have all the wars together, and in regular and concise form, so that they can be easily compared and reviewed. The teacher is saved the necessity of putting tables and chronologies on the board. To the pupil it is a skeleton ready to be clothed from his own reading and always at hand hereafter for a more elaborate study of any topic that may become interesting to him. The field for original investigation should be restricted. A wise teacher says: "To refer a pupil in a general way to a library for information is, in average cases, to make sure that he will get none. Ordinary students cannot investigate in a course covering so much ground; and, indeed, where there is too much trash, it is unfair to turn them into an intellectual cornfield to help themselves. The references should be specific and limited."

In the preparation of the table some obstacles have been encountered, especially with respect to dates, spelling, and meagre accounts. What one history lacks must be looked up elsewhere. The table is not entirely satisfactory, but it is hoped it will serve the purpose. Here is presented an opportunity to teach the use of indexes of histories and books appertaining thereto. "To encourage pupils to discover likenesses and differences is to promote thinking."

Name and Date.	Causes.	Chief Events.	Results.	Remarks.
1. Pequot War. 1637.	1. Fate of Captain Oldham. 2. Indian atrocities.	The Indian wigwams at Mystic were burned.	The Pequot nation was almost extinguished. Part of the survivors surrendered. Another part, with Chief Sassacus, joined the Mohawks and Narragansetts. They tried to enlist the Mohawks and Narragansetts on their side and broke the friendship which existed between the colonists and the Mohawks and Narragansetts before the war. Almost all of the tribes united when King Philip's War broke out.	The colonists started out with ninety men, but only seventy-seven of them attacked the fort. They had two killed and sixteen wounded, while the Indians lost seventy wigwams and between five hundred and six hundred men.
2. King Philip's War. 1675–'6.	1. Prosperity and encroachment of the whites. 2. Unjust treatment of the Indians.	1. Swanzea, Hadley, Deerfield, and other towns were burned. 2. The swamp fight. 3. Fate of King Philip and Canonchet.	1. The power of the Indians was broken and the colonies never again felt afraid of the Indians. 2. The greater part of the survivors joined eastern tribes or those of Canada. They became hostile again at a subsequent epoch and joined the French in the Seven Years' War.	1. The colonies sacrificed more than six hundred lives and half a million dollars. 2. The Indian tribes which took part in this war were the Wampanoags, Narragansetts, Nipmuchs, and other tribes living in New England.
3. Bacon's Rebellion. 1676.	REAL—1. The government gradually usurped the power of the people. 2. The assembly continued to sit without change. 3. The officers extended their terms indefinitely.	1. Campaign of Bacon against the Indians. 2. The "White Apron Brigade." 3. Burning of Jamestown.	1. Twenty-two of Bacon's followers were hung. 2. Berkeley was recalled. 3. Jamestown was never rebuilt. 4. Oppression of the colonists was increased. 5. Williamsburg became the capital.	

Name and Date.	Causes.	Chief Events.	Results.	Remarks.
	4. Suffrage was restrictd by a property qualification and the people were heavily taxed. 5. There was dissatisfaction because the king had given Virginia to Lords Arlington and Culpeper. IMMEDIATE—(1) Indian depredations. (2) Delay of Governor Berkeley to help the colonists.		6. After that time there was no more trouble with the Indians in Virginia. 7. The colony never forgot the meaning of the Bacon Rebellion and its protest against tyrannical government. Just a century later their descendants met at Williamsburg and declared themselves independent of Great Britain.	
4. King William's War. 1689–'97.	1. War in Europe between the mother countries gave occasion for a quarrel in America for their respective colonies. 2. King William of England was a great enemy of Louis XIV of France, who supported the dethroned Stuarts. 3. Conflicting claims to territory caused the trouble in America.	1. Indian ravages, especially in New York. 2. Burning of Schenectady. 3. Expedition against Montreal and Quebec. 4. Capture of Port Royal, Acadia.	1. The treaty of Ryswick brought the war to an end. 2. Colonial territory was unchanged. 3. Paper money was issued in Massachusetts.	

5. Queen Anne's War. 1702–'13.	1. The king of Spain died without any direct heir. The succession affected the balance of power. On the death of James II, in 1701, his son was proclaimed king of England by France. This was a violation of the treaty of Ryswick. 2. Colonial claims to territory were still conflicting.	1. Indian ravages, mostly in New England. 2. Expedition against Quebec and Montreal. 3. Capture of Port Royal, Acadia.	By the treaty of Utrecht, England gained Acadia and the control of the fisheries near Newfoundland.	
6. King George's War 1744–'48.	1. The death of the king of Austria again imperiled the balance of power. France still adhered to the cause of the dethroned Stuarts. 2. Claims to colonial territory were unsettled.	1. Capture of Louisburg. 2. Indian devastations.	The treaty of Aix-la-Chapelle left the colonial territory unchanged and all conquests were restored.	
7. French and Indian War. 1754–'63.	REMOTE—Conflicting claims of the English, French and Indians to territory and the enmity between England and France. IMMEDIATE—(1) Quarrels between French and English traders and trappers. (2) Settlement of the Ohio Valley.	1. Washington was sent to the French fort—1753. 2. Braddock's defeat—1754. 3. Expeditions against Acadia, Forts Du Quesne, Niagara, and Ticonderoga—1755. 4. Campaign and siege of Louisburg—1757 and 1758. 5. Siege of Quebec—1759. 6. Surrender of Montreal—1760.	By the treaty of Paris (1) France surrendered Canada to England, except two small islands near Newfoundland, and her possessions east of the Mississippi, except New Orleans. (2) France ceded to Spain her possessions west of the Mississippi and New Orleans. (3) Spain ceded Florida to England in return for Havana.	1. Before the war France claimed a large part of the country, but after the war she did not own a single acre, except two small islands named Miquelon and St. Pierre. 2. The experience gained by the colonists in this war was valuable. They learned that they had a number of men capable of managing an army, and that they could govern them-

Name and Date.	Causes.	Chief Events.	Results.	Remarks.
		7. The Cherokee War—1760. 8. Pontiac's War—1763.		selves. The American generals won more victories than the British generals. The colonists became confident that they could fight as well as the British. 3. The war created a bond of union among the colonies and engendered strife between England and the colonies.
8. Revolutionary War. 1775–'83.	REMOTE—(1) The character of the colonists mentioned above in the remarks upon the French and Indian War. (2) Laws passed by parliament interfering with colonial trade and industries. (3) The character of the royal governors. IMMEDIATE — (1) The Stamp Act. (2) Taxation without representation.	1. Battle of Lexington—April 19, 1775. 2. Battle of Bunker Hill—June 17, 1775. 3. Siege of Boston—1776. 4. Battle of Long Island—August 27, 1776. 5. Capture of the Hessians at Trenton — December 26, 1776. 6. Battle of Princeton—January 3, 1777. 7. Burgoyne's invasion and surrender—1777. 8. Washington's Campaign in Pennsylvania—1777. 9. Battle of Monmouth—June 28, 1778. 10. Siege of Savannah—1779.	Great Britain acknowledged the independence of the United States by the treaty of Versailles. 2. The boundaries of the United States were determined—north and east as at present; south, Florida; and west, the Mississippi. 3. England granted Florida to Spain. 4. The United States was in a distressed condition, heavily in debt and without a head. 5. Business was at a standstill. 6. The weaker States were afraid of the stronger ones. The stronger ones were jealous of each other. 7. England felt very sore over the defeat and harassed the colonists in various ways—especially tried to ruin our commerce—until the war of 1812 broke out.	ACTS INFLUENCING: 1. The Navigation Acts of 1631, 1651, 1660, and 1663. 2. Internal trade was restricted—1673. 3. The Board of Trade and Plantations was established—1696. 4. Courts of Admiralty were established—1697. 5. Exportation of hats was forbidden—1732. 6. The Importation Act—1733. 7. Erection of iron-works was forbidden—1750. 8. The Stamp Act—1765. 9. The Mutiny Act—1765. EVENTS INFLUENCING: 1. Resolutions of Patrick Henry—1765.

		11. Siege of Charleston—1780. 12. Exploits of Marion, Sumter, Lee, and Pickens—1780. 13. Treason of Arnold—1780. 14. Greene's Campaign in the south—1781. 15. Siege of Yorktown and surrender of Cornwallis—September 28 - October 19, 1781.		2. The Boston Massacre—1770. 3. The Boston Tea Party—1773. 4. The Boston Port Bill—1774.
9. Tripolitan War. 1801–1806.	Piracy against American vessels on the Mediterranean Sea.	1. Surrender of Captain Bainbridge and his crew—1803. 2. Burning of the Philadelphia by Decatur—1804. 3. Hamet and General Eaton formed a combination and defeated the Tripolitans—1805.	1. The captive Americans were released. 2. Hamet was not restored to the throne as had been agreed with Eaton. 3. The Tripolitans agreed to let our merchant vessels alone in the future without tribute.	
10. War with Tecumseh. 1811.	The desire of the Indians to drive out the white settlers who were increasing in number west of the Alleghanies.	Battle of Tippecanoe—November 7, 1811.	1. The Indians were defeated. 2. Some of the Indians joined the English in Canada. The belief that England secretly encouraged Tecumseh's plot increased the desire of the majority for a war with England.	Tecumseh was absent in the south, trying to unite the other Indian tribes, at the time the battle took place. See what influence his acts had on the next two wars.
11. War of 1812. 1812–'15.	1. Imprisonment of American seamen. 2. American merchant vessels were seized by the	1. Loss of Michigan territory—1812. 2. Americans successful in five naval battles—1812.	1. By the treaty of Ghent conquests were restored and England agreed to suppress the importation of slaves.	EVENTS INFLUENCING: 1. Firing upon the Chesapeake—1807. 2. Engagement between the

Name and Date.	Causes.	Chief Events.	Results.	Remarks.
	British to get supplies for the British Army during the war between England and France.	3. Recovery of Michigan—1813. 4. Burning of Washington City—1814. 5. Battle of New Orleans—January 8, 1815.	2. England virtually yielded the right of search. 3. Superiority of the American navy was established. 4. Manufactories were built. 5. The United States was rendered more self-reliant. 6. Prestige of the United States was increased among the nations. 7. England and America have been fast friends ever since.	President and Little Belt—1811. 3. Battle of Tippecanoe—1811.
12. War with the Creeks. 1813-'14.	The artful Tecumseh came among the Creeks and urged them to shake off the restraints of civilized life.	1. Massacre at Fort Mims—August 30, 1813. 2. Battle of Tallushatchee—November 3, 1813. 3. Battle of Talladega—November 7, 1813. 4. Battle of Hilabeetown—November 11, 1813. 5. Battle of Antossee—November 29, 1813. 6. Battle of Eccanachaca (Holy Ground)—December 23, 1813. 7. Camp Defiance—January 27, 1814. 8. Tohopeka (Horseshoe Bend)—March 27, 1814.	The power of the Indians was completely destroyed and the greater part of their territory was surrendered to the United States.	Major Beasley, Generals Coffee, Jackson, and Claiborne commanded the American forces at different points.

13. War with Algiers. 1815.	Commencing anew the piracy of American vessels and capturing their crews.	Descent of Decatur upon the Algerines—May, 1815.	1. The Dey gave up the property and men which he had taken and exempted the United States from tribute. He paid six million dollars for previous damages. 2. Security against future wrongs was obtained.	
14. First Seminole War. 1818.	Piracy, robbery, and troubles of all sorts by the Indians and negroes in the south.	St. Mark's and Pensacola were seized.	1. The governor and other Spaniards were driven to Cuba. 2. Spain feared that trouble would break out again, so she sold Florida to the United States in 1819.	General Jackson's conduct was discussed *pro* and *con*.
15. Black Hawk War. 1832.	Encroachment upon the public lands in Illinois, Wisconsin and Iowa by the white people.	Battle of the Iowa—August 2, 1832.	1. The Indians were driven beyond the Mississippi. 2. Removal of the Indians encouraged emigration to the western states.	The Winnebagos, Sacs, and Foxes were the tribes engaged in this war.
16. Second Seminole War. 1835–'42.	1. Attempt to reduce the Maroons or half-breeds to slavery. 2. Refusal of the Indians to be removed west of the Mississippi.	1. Tampa Bay—December 28, 1835. 2. Withlacooche — December 31, 1835, and February 29, 1836. 3. Fort Drane—August 21, 1836. 4. Wahoo Swamp—November 17–21, 1836. 5. Capture of Osceola by Jessup—1837. 6. Villages in Florida, Georgia, and Alabama attacked by Indians. 7. Pelaklikaha — April 19, 1842.	The Indians were removed to Indian Territory.	The commanders of the Americans were Major Dade, Generals Clinch, Gaines, Call, and Jessup, Captain Ashby, Colonels Taylor and Worth, and a few others.

Name and Date.	Causes.	Chief Events.	Results.	Remarks.
17. Mexican War. 1846–'48.	REAL — Annexation of Texas. IMMEDIATE — Boundary line between Mexico and Texas.	1. Battle of Fort Brown—April 23, 1846. 2. Battle of Buena Vista—February 22–23, 1846. 3. Capture of California by Fremont—1847. 4. Capture of New Mexico by Kearney—1847. 5. Battle of Vera Cruz—March 27, 1847. 6. Scott's march to the City of Mexico. 7. Capture of the City of Mexico—September 24, 1847.	1. By the treaty of Guadalupe Hidalgo the Rio Grande was made the boundary line between Mexico and Texas, and California and New Mexico were ceded to the United States. 2. It revived the question of slavery in American politics and finally led to the great Civil War.	The United States paid Mexico $15,000,000 and assumed $3,500,000 due Texan citizens.
18. Civil War. 1861–'65.	REAL BUT REMOTE—(1) Different constructions of the constitution. (2) Different systems of labor in the north and the south. (3) Lack of intercourse between the north and the south. (4) Increase of territory. IMMEDIATE — Secession of the States.	1. Attack on Fort Sumter—April 15, 1861. 2. Battle of Bull Run—July 21, 1861. 3. Battle of Ball's Bluff—October 21, 1861. 4. Trent affair—November 8, 1861. 5. Capture of Forts Henry and Donelson—February 14–16, 1862. 6. Merrimac and Monitor—March 9, 1862. 7. Battle of Shiloh—April 6–7, 1862.	1. Freedom of the slaves was secured. 2. A great amount of property was destroyed. 3. The Union was preserved. 4. The question whether a State had a right to leave the Union or not was settled. 5. The States have been more strongly attached to each other since then than before.	1. For a long time manufacturing interests of New England came in conflict with the agricultural interests of the south, hence the bitter opposition of the south to the tariff. 2. Slavery was gradually given up in the north, partly because it was not profitable, while in the south it was exceedingly profitable. ACTS, EVENTS, PARTIES, AND WRITINGS INFLUENCING THE WAR: 1. Invention of the cotton-gin—1793.

2. Fugitive Slave Laws—1793 and 1850.
3. Protective tariff laws.
4. Nullification Act in South Carolina—1832.
5. New England Anti-Slavery Society organized—1832.
6. Annexation of Texas—1845.
7. Missouri Compromise—1850.
8. Omnibus Bill—1850.
9. Kansas-Nebraska Bill—1854.
10. Dred Scott Decision—1857.
11. Personal Liberty Bills—1857.
12. John Brown's raid—1859.
13. Anti-slavery papers, books, speeches.
14. Uncle Tom's Cabin.
15. Anti-Slavery parties:
(*a*) Liberty Party—1840-'48.
(*b*) Free-Soil Party—1850-'56.
(*c*) Republican Party—1854.

8. Capture of New Orleans—April 25, 1862.
9. Seven Days' Battles—June 26–July 1, 1862.
10. Second Battle of Bull Run—August 30, 1862.
11. Battle of Murfreesboro—December 31, 1862–January 2, 1863.
12. Battle of Chancellorsville—May 2–3, 1863.
13. Battle of Gettysburg—July 1–4, 1863.
14. Siege of Vicksburg—May–July, 1863.
15. Siege of Charleston—1863.
16. Sherman's march to the sea—May 4 to December 26, 1864.
17. Alabama and Kearsarge—June 14, 1864.
18. Fall of Petersburg and Richmond—April 2–3, 1865.
19. Surrender of Lee—April 9, 1865.
20. Johnston's surrender—April 25, 1865.

In connection with the table, studies of special subjects may be arranged and successfully taught. Below are two taken from Sheldon's American History (a manual for teachers):

SPECIAL STUDY OF BRADDOCK'S DEFEAT.

I. Causes of the defeat.
   1. Braddock's ignorance of the country.
   2. His ignorance of the Indians' way of fighting.
   3. Neglect of colonial advice.
   4. Braddock's slow march hindered by wagons.
   5. Different modes of fighting of opponents.
      (*a*) Indians—in ambush, behind trees, rocks, etc.
      (*b*) British—in line and in open field.

II. Parties engaged.
   1. British regulars and British colonists.
   2. French troops and Indians.

III. Result of Braddock's defeat.
   1. Cruel treatment of British prisoners by the Indians.
   2. Frontier left unprotected.
   3. Indian murders of English pioneers.

SPECIAL STUDY OF THE SIEGE OF QUEBEC.

I. Importance of Quebec.
   1. Gate of Canada.
   2. Upper gate of Louisiana; lower gate, New Orleans.

II. Difficulties of siege.
   1. On part of English.
      (*a*) Precipice-fort of Quebec.
      (*b*) Must take it in the enemy's country.
      (*c*) Slow communication with home.
   2. On part of French.
      (*a*) Famine—lack of supplies.

III. Leaders.
    1. English—Wolfe.
    2. French—Montcalm.

IV. Result of siege of Quebec.
    1. Final English success.
    2. End of the war.
    3. Both leaders were killed.

How and when the table should be taught is left to the discretion of the teacher. The manner of recitation should be varied.

Children get tired of one method. Questioning is usually the best method to find out whether children understand new lessons and to encourage original thinking. The topical method may be used as a review for the pupil to express his ideas in good language. If the pupils fail to find all the topics outlined in the histories or to grasp the language of the books, it is an excellent plan for the teacher to relate the facts in signs and then have the pupils reproduce them just as he would require them to reproduce a story from signs.

CHARLES D. SEATON,
Instructor in the North Dakota School,
Devils Lake, North Dakota.

THE FIFTEENTH MEETING OF THE CONVENTION OF AMERICAN INSTRUCTORS OF THE DEAF.

GALLAUDET COLLEGE,
KENDALL GREEN, NEAR WASHINGTON, D. C.,
May 20, 1898.

The Fifteenth Meeting of the Convention, as announced in the April number of the *Annals*, will be held in the Ohio Institution for the Deaf and Dumb, at Columbus, beginning on Thursday, July 28, 1898. The Convention will be called to order at 3 P. M.

Circulars concerning the reductions to be had in railroad fares have been sent to all the schools by Mr. J. W. Jones, Local Committee, with directions how to secure the benefit of the reductions. These directions should be carefully followed.

The following general outline of a programme has been arranged, subject to change by the Chairmen of Section Committees, in consultation with the Standing Executive Committee.

Thursday, July 28.

3 P. M. Convention called to order. Addresses of welcome and response.

7 P. M. Social reunion.

Friday, July 29.

9 A. M. Prayer. Calling of the roll of the Convention. Admission of members. Announcements. Annual address of the President.

2 P. M. Normal section. Papers and discussion.

7 P. M. Kindergarten section. Papers and discussion.

Saturday, July 30.

9 A. M. Prayer. Oral section. Papers and discussion.

7 P. M. Industrial section. Papers and discussion.

Sunday, July 31.

Services and meeting to be arranged later.

Monday, August 1.

9 A. M. Prayer. Normal section. Question box.

2 P. M. Oral section. Living exhibits. Discussion.

7 P. M. Oral section. Papers and discussion.

Tuesday, August 2.

9 A. M. Prayer. Normal section. Papers and discussion.

2 P. M. Auricular section. Papers, discussion, and living exhibits.

7 P. M. Report of the Standing Executive Committee and election of officers.

Wednesday, August 3.

9 A. M. Prayer. Normal section. Question box. Discussion.

2 P. M. Unappropriated.

7 P. M. Closing session of the Convention.

All persons who expect to attend the Convention are urged to acquaint Mr. J. W. Jones, Local Committee and Superintendent of the Ohio Institution, with the fact at as early a day as possible. A charge of seventy-five cents per day for board will be made, as at Flint, Michigan, in 1895.

The Standing Committee has pleasure in announcing that a number of European instructors have signified their intention of attending the Convention, and there is reason to hope that delegates may be present from Mexico and South America. The Section Committees have been actively at work, arranging for interesting programmes, and there is a good prospect of instructive meetings in all the departments of our work.

In behalf of the Standing Committee,

EDWARD M. GALLAUDET,
President of the Convention.

SCHOOL ITEMS.

Breslau (*Prussia*) *Institution.*—Mr. Heidsiek has been granted a leave of absence by the authorities of the Breslau Institution to enable him to visit American schools for the deaf. He expects to remain until after the meeting of the Convention at Columbus.

Calcutta (*India*) *School.*—The authorities of the Calcutta School have unanimously resolved to devote a portion of the subscriptions received from America to establish a scholarship to be called "The Gallaudet Scholarship" in honor of President Gallaudet.

Chefoo (*China*) *School.*—The school formerly conducted by Mrs. Annetta T. Mills at Tung Chow has been removed to Chefoo. Mrs. Mills has received a year's release from her direct mission work in order to place the school on a substantial basis. At the outset she depends chiefly upon friends in

America and Great Britain for assistance, but hopes that later the school will be supported by the Chinese. Contributions for this worthy object may be sent to Dr. Z. F. Westervelt, Principal of the Western New York Institution for Deaf-Mutes, Rochester, New York.

Chicago Day-Schools.—Mr. James E. Gallaher, an instructor in these schools, has published an interesting volume of 222 octavo pages containing portraits and character sketches of prominent deaf persons in America who are engaged in the higher pursuits of life, such as business and professional men and women, foremen and superintendents of industries, manufacturers, inventors, editors, publishers, authors, poets, clerks occupying important positions, etc. A majority of the persons named are teachers, but other professions and occupations are well represented. The sketches given number 147, and though the list is incomplete it serves well to illustrate the remarkable success in life attained by some of the graduates of our schools. The book is published by the author, 36 Howland Block, Chicago, Illinois, and the price is $1.50.

Gallaudet College.—On Presentation Day, May 4, 1898, Mr. A. J. Eickhoff, Mr. R. L. Erd, Miss H. R. Leyder, Miss L. E. McGowan, Mr. P. N. Peterson, Mr. W. H. Rothert, Miss Clara Runck, Miss M. E. Stemple, Miss S. M. Young, and Mr. Robert Zahn, members of the senior class, were presented as candidates for the degree of Bachelor of Arts; Messrs. G. E. Fister and B. F. Jackson, also members of the senior class, for the degrees, respectively, of Bachelor of Science and Bachelor of Philosophy; Mr. C. E. White, B. A., a member of the normal class, for the degree of Master of Arts, and Mr. F. M. Driggs, Mr. E. S. Henne, Miss E. B. Pyle, and Miss L. C. Wing, also members of the normal class, for normal diplomas. The announcement was made of the conferring of the degree of Master of Arts in course upon Messrs. Henry Gross, O. H. Regensburg, and Harry Van Allen.

An interesting feature of the occasion was the unveiling of the bust of the Abbé de l'Épée, by the deaf artist Felix Plessis, mentioned in the last number of the *Annals* as having recently been presented by the deaf people of France to President

Gallaudet. The bust is of colossal size and bears this inscription:

Offert à Edward Miner Gallaudet
Défenseur du Système Com biné
Par les Sourds Muets de France
28 *novembre* 1897
Souscription Publique.

Besides the orations and dissertations of members of the graduating class, addresses were delivered by President Gallaudet and Mr. Jules Cambon, the French ambassador, in connection with the unveiling of the bust, and an address was given to the graduating class by the Hon. David B. Henderson, Member of Congress from Iowa.

Iowa School.—A change has been made by the Legislature in the form of government of the Iowa school, all the State institutions being placed under a single board of control, as in Wisconsin, instead of having a separate board for each institution. Under the new order the entire responsibility for the conduct of the School, which for some years has been divided between the Superintendent and the Principal, is placed upon the Superintendent, but we are informed that no changes are proposed in the department of instruction.

Kentucky School.—The Kentucky School celebrated its seventy-fifth anniversary by appropriate exercises on the 11th of April last. Addresses were delivered by Mr. Augustus Rogers, Principal, the Rev. James Lane Allen, a member of the first separate Board of Commissioners, the Rev. F. J. Cheek, a son of a former teacher and a grandson of the first principal, and Mr. G. M. McClure, a present instructor. The School stands fourth in age among the American schools for the deaf, and was the first established west of the Alleghanies.

London Day-Schools.—The Rev. Dr. William Stainer, the founder of these schools, died of heart disease, at his home in London, April 9, 1898. Dr. Stainer was born in London in 1828, and began his work as a teacher of the deaf in the Old Kent Road Asylum at the age of fourteen. In 1854 he was appointed Superintendent of the Adult Deaf and Dumb

Society in Manchester, and while thus engaged he organized and conducted the Manchester Infant School, pursued a course of study, and was ordained as a clergyman. In 1872 he became chaplain of the London Royal Association and two years later opened the first day-school under the direction of the London School Board. He directed the work of the School Board Classes until 1896, and saw the number of pupils increase during that period from five to more than four hundred. He also established the "Stainer Homes" in London for homeless deaf children and those living at a distance from the schools, and was active in organizing the *Quarterly Review of Deaf-Mute Education* and the College of Teachers of the Deaf and Dumb. In 1887 he received the degree of L. H. D. from Gallaudet College. Dr. Elliott says of him in the *British Deaf Monthly* that to all his undertakings "he brought characteristic energy, industry, clearness of judgment, sympathy, and aptitude. He never spared himself; and he was always cheerful, apparently happy under the strain, and hopeful, with a load of cares, anxieties, and worries which would have overwhelmed one of a less sanguine disposition."

New York Institution for Improved Instruction.—Mr. Greene, after more than twenty-five years of service, has resigned the principalship of this Institution. He hopes to find a position, either in an Oral or a Combined-System school, where he can devote himself exclusively to teaching. In the meantime he will teach lip-reading to adult deaf persons, cure defects of speech of hearing persons, train teachers of articulation, etc. After the 30th of June his address will be Southington, Connecticut.

ADVERTISEMENT.

WANTED, a position as teacher in a deaf-mute school by a semi-mute, a graduate of Gallaudet College, with 11 years' experience in teaching—4 years in a day-school, 2 years as a private tutor, and 5 years in the Illinois Institution. References given. Address "Teacher," care of the Editor of the *Annals*, Kendall Green, Washington, D. C.

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